

0500 #15  
py  
7.12.00

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/457,066DATE: 12/22/1999  
TIME: 15:03:24

Input Set: I457066.RAW

<p>This Raw Listing contains the General Information Section and up to first 5 pages.</p>
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ENTERED

P.S.

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1  <110> APPLICANT: Gao, Zeren
2      Hart, Charles E.
3      Piddington, Christopher S.
4      Sheppard, Paul O.
5      Shoemaker, Kimberly E.
6      Gilbertson, Debra G.
7      West, James W.
8  <120> TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3
9  <130> FILE REFERENCE: 98-60
10 <140> CURRENT APPLICATION NUMBER: US/09/457,066
11 <141> CURRENT FILING DATE: 1999-12-07
12 <160> NUMBER OF SEQ ID NOS: 50
13 <170> SOFTWARE: FastSEQ for Windows Version 3.0
14 <210> SEQ ID NO 1
15 <211> LENGTH: 1760
16 <212> TYPE: DNA
17 <213> ORGANISM: Homo sapiens
18 <220> FEATURE:
19 <221> NAME/KEY: CDS
20 <222> LOCATION: (154)...(1191)
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22      attatgtgga aactaccctg cgattctctg ctgccagagc aggcctcggcg cttccacccc      60
23      agtgcagcct tcccctggcg gtgggtgaaag agactcggga gtcgctgctt ccaaagtgcc      120
24      cgccgtgagt gagctctcac cccagtcagc caa atg agc ctc ttc ggg ctt ctc      174
25                                     Met Ser Leu Phe Gly Leu Leu
26                                     1           5
27      ctg ctg aca tct gcc ctg gcc ggc cag aga cag ggg act cag gcg gaa      222
28      Leu Leu Thr Ser Ala Leu Ala Gly Gln Arg Gln Gly Thr Gln Ala Glu
29      10           15           20
30      tcc aac ctg agt agt aaa ttc cag ttt tcc agc aac aag gaa cag aac      270
31      Ser Asn Leu Ser Ser Lys Phe Gln Phe Ser Ser Asn Lys Glu Gln Asn
32      25           30           35
33      gga gta caa gat cct cag cat gag aga att att act gtg tct act aat      318
34      Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr Val Ser Thr Asn
35      40           45           50           55
36      gga agt att cac agc cca agg ttt cct cat act tat cca aga aat acg      366
37      Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr Pro Arg Asn Thr
38      60           65           70
39      gtc ttg gta tgg aga tta gta gca gta gag gaa aat gta tgg ata caa      414
40      Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile Gln
41      75           80           85
42      ctt acg ttt gat gaa aga ttt ggg ctt gaa gac cca gaa gat gac ata      462
43      Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp Ile
44      90           95           100

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**RAW SEQUENCE LISTING**  
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45	tgc aag tat gat ttt gta gaa gtt gag gaa ccc agt gat gga act ata	510
46	Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr Ile	
47	105 110 115	
48	tta ggg cgc tgg tgt ggt tct ggt act gta cca gga aaa cag att tct	558
49	Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile Ser	
50	120 125 130 135	
51	aaa gga aat caa att agg ata aga ttt gta tct gat gaa tat ttt cct	606
52	Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe Pro	
53	140 145 150	
54	tct gaa cca ggg ttc tgc atc cac tac aac att gtc atg cca caa ttc	654
55	Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val Met Pro Gln Phe	
56	155 160 165	
57	aca gaa gct gtg agt cct tca gtg cta ccc cct tca gct ttg cca ctg	702
58	Thr Glu Ala Val Ser Pro Ser Val Leu Pro Pro Ser Ala Leu Pro Leu	
59	170 175 180	
60	gac ctg ctt aat aat gct ata act gcc ttt agt acc ttg gaa gac ctt	750
61	Asp Leu Leu Asn Asn Ala Ile Thr Ala Phe Ser Thr Leu Glu Asp Leu	
62	185 190 195	
63	att cga tat ctt gaa cca gag aga tgg cag ttg gac tta gaa gat cta	798
64	Ile Arg Tyr Leu Glu Pro Glu Arg Trp Gln Leu Asp Leu Glu Asp Leu	
65	200 205 210 215	
66	tat agg cca act tgg caa ctt ctt ggc aag gct ttt gtt ttt gga aga	846
67	Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys Ala Phe Val Phe Gly Arg	
68	220 225 230	
69	aaa tcc aga gtg gtg gat ctg aac ctt cta aca gag gag gta aga tta	894
70	Lys Ser Arg Val Val Asp Leu Asn Leu Leu Thr Glu Glu Val Arg Leu	
71	235 240 245	
72	tac agc tgc aca cct cgt aac ttc tca gtg tcc ata agg gaa gaa cta	942
73	Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu Glu Leu	
74	250 255 260	
75	aag aga acc gat acc att ttc tgg cca ggt tgt ctc ctg gtt aaa cgc	990
76	Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val Lys Arg	
77	265 270 275	
78	tgt ggt ggg aac tgt gcc tgt tgt ctc cac aat tgc aat gaa tgt caa	1038
79	Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu Cys Gln	
80	280 285 290 295	
81	tgt gtc cca agc aaa gtt act aaa aaa tac cac gag gtc ctt cag ttg	1086
82	Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu Gln Leu	
83	300 305 310	
84	aga cca aag acc ggt gtc agg gga ttg cac aaa tca ctc acc gac gtg	1134
85	Arg Pro Lys Thr Gly Val Arg Gly Leu His Lys Ser Leu Thr Asp Val	
86	315 320 325	
87	gcc ctg gag cac cat gag gag tgt gac tgt gtg tgc aga ggg agc aca	1182
88	Ala Leu Glu His His Glu Glu Cys Asp Cys Val Cys Arg Gly Ser Thr	
89	330 335 340	
90	gga gga tag ccgcatcacc accagcagct cttgcccaga gctgtgcagt	1231
91	Gly Gly	
92	345	
93	gcagtggtctg attctattag agaacgtatg cgttatctcc atccttaatc tcagttgttt	1291
94	gcttcaagga cctttcatct tcaggattta cagtgcattc tgaaagagga gacatcaaac	1351

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/457,066

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Input Set: I457066.RAW

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95      agaattagga gttgtgcaac agctcttttg agaggaggcc taaaggacag gagaaaaggt      1411
96      cttcaatcgt ggaaagaaaa ttaaattgtt tattaaatag atcaccagct agtttcagag      1471
97      ttaccatgta cgtattccac tagctgggtt ctgtatttca gttctttcga tacggcttag      1531
98      ggtaatgtca gtacaggaaa aaaactgtgc aagtgagcac ctgattccgt tgccttgctt      1591
99      aactctaaag ctccatgtcc tgggcctaaa atcgtataaa atctggattt tttttttttt      1651
100     tttttgctca tattcacata tgtaaaccag aacattctat gtactacaaa cctgggtttt      1711
101     aaaaaggaac tatgttgcta tgaattaaac ttgtgtcgtg ctgatagga      1760
102     <210> SEQ ID NO 2
103     <211> LENGTH: 345
104     <212> TYPE: PRT
105     <213> ORGANISM: Homo sapiens
106     <400> SEQUENCE: 2
107     Met Ser Leu Phe Gly Leu Leu Leu Leu Thr Ser Ala Leu Ala Gly Gln
108           1              5              10              15
109     Arg Gln Gly Thr Gln Ala Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe
110           20              25              30
111     Ser Ser Asn Lys Glu Gln Asn Gly Val Gln Asp Pro Gln His Glu Arg
112           35              40              45
113     Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro
114           50              55              60
115     His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val
116           65              70              75              80
117     Glu Glu Asn Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu
118           85              90              95
119     Glu Asp Pro Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu
120           100             105             110
121     Glu Pro Ser Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr
122           115             120             125
123     Val Pro Gly Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe
124           130             135             140
125     Val Ser Asp Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr
126           145             150             155             160
127     Asn Ile Val Met Pro Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu
128           165             170             175
129     Pro Pro Ser Ala Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala
130           180             185             190
131     Phe Ser Thr Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp
132           195             200             205
133     Gln Leu Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly
134           210             215             220
135     Lys Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu
136           225             230             235             240
137     Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser
138           245             250             255
139     Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro
140           260             265             270
141     Gly Cys Leu Leu Val Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu
142           275             280             285
143     His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys
144           290             295             300

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RAW SEQUENCE LISTING  
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Input Set: I457066.RAW

145 Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu  
146 305 310 315 320  
147 His Lys Ser Leu Thr Asp Val Ala Leu Glu His His Glu Glu Cys Asp  
148 325 330 335  
149 Cys Val Cys Arg Gly Ser Thr Gly Gly  
150 340 345

151 <210> SEQ ID NO 3  
152 <211> LENGTH: 116  
153 <212> TYPE: PRT  
154 <213> ORGANISM: Artificial Sequence  
155 <220> FEATURE:  
156 <223> OTHER INFORMATION: peptide motif  
157 <220> FEATURE:  
158 <221> NAME/KEY: VARIANT  
159 <222> LOCATION: (2)...(19)  
160 <223> OTHER INFORMATION: Xaa is any amino acid  
161 <220> FEATURE:  
162 <221> NAME/KEY: VARIANT  
163 <222> LOCATION: (20)...(34)  
164 <223> OTHER INFORMATION: Xaa is any amino acid or not present  
165 <220> FEATURE:  
166 <221> NAME/KEY: VARIANT  
167 <222> LOCATION: (36)...(36)  
168 <223> OTHER INFORMATION: Xaa is any amino acid  
169 <220> FEATURE:  
170 <221> NAME/KEY: VARIANT  
171 <222> LOCATION: (38)...(38)  
172 <223> OTHER INFORMATION: Xaa is any amino acid  
173 <220> FEATURE:  
174 <221> NAME/KEY: VARIANT  
175 <222> LOCATION: (40)...(45)  
176 <223> OTHER INFORMATION: Xaa is any amino acid  
177 <220> FEATURE:  
178 <221> NAME/KEY: VARIANT  
179 <222> LOCATION: (46)...(72)  
180 <223> OTHER INFORMATION: Xaa is any amino acid or not present  
181 <220> FEATURE:  
182 <221> NAME/KEY: VARIANT  
183 <222> LOCATION: (74)...(93)  
184 <223> OTHER INFORMATION: Xaa is any amino acid  
185 <220> FEATURE:  
186 <221> NAME/KEY: VARIANT  
187 <222> LOCATION: (94)...(113)  
188 <223> OTHER INFORMATION: Xaa is any amino acid not present  
189 <220> FEATURE:  
190 <221> NAME/KEY: VARIANT  
191 <222> LOCATION: (115)...(115)  
192 <223> OTHER INFORMATION: Xaa is any amino acid  
193 <400> SEQUENCE: 3  
194 Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

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# RAW SEQUENCE LISTING PATENT APPLICATION US/09/457,066

DATE: 12/22/1999  
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Input Set: I457066.RAW

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195      1      5      10      15
W--> 196      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
197      20      25      30
W--> 198      Xaa Xaa Cys Xaa Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
199      35      40      45
W--> 200      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
201      50      55      60
W--> 202      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa
203      65      70      75      80
W--> 204      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
205      85      90      95
W--> 206      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
207      100      105      110
W--> 208      Xaa Cys Xaa Cys
209      115
210      <210> SEQ ID NO 4
211      <211> LENGTH: 24
212      <212> TYPE: PRT
213      <213> ORGANISM: Artificial Sequence
214      <220> FEATURE:
215      <223> OTHER INFORMATION: peptide motif
216      <220> FEATURE:
217      <221> NAME/KEY: VARIANT
218      <222> LOCATION: (2)...(2)
219      <223> OTHER INFORMATION: Xaa is Lys or Arg
220      <220> FEATURE:
221      <221> NAME/KEY: VARIANT
222      <222> LOCATION: (4)...(4)
223      <223> OTHER INFORMATION: Xaa is Asp, Asn or Glu
224      <220> FEATURE:
225      <221> NAME/KEY: VARIANT
226      <222> LOCATION: (5)...(5)
227      <223> OTHER INFORMATION: Xaa is Trp, Tyr or Phe
228      <220> FEATURE:
229      <221> NAME/KEY: VARIANT
230      <222> LOCATION: (6)...(16)
231      <223> OTHER INFORMATION: Xaa is any amino acid
232      <220> FEATURE:
233      <221> NAME/KEY: VARIANT
234      <222> LOCATION: (17)...(20)
235      <223> OTHER INFORMATION: Xaa is any amino acid or not present
236      <220> FEATURE:
237      <221> NAME/KEY: VARIANT
238      <222> LOCATION: (22)...(22)
239      <223> OTHER INFORMATION: Xaa is Lys or Arg
240      <220> FEATURE:
241      <221> NAME/KEY: VARIANT
242      <222> LOCATION: (23)...(23)
243      <223> OTHER INFORMATION: Xaa is Trp, Tyr or Phe
244      <400> SEQUENCE: 4

```

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Input Set: I457066.RAW

Line	Error/Warning	Original Text
91	W Line data has been corrected	Gly Gly *
194	W "N" or "Xaa" used: Feature required	Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa X
196	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa X
198	W "N" or "Xaa" used: Feature required	Xaa Xaa Cys Xaa Gly Xaa Cys Xaa Xaa Xaa X
200	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa X
202	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa X
204	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa X
206	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa X
208	W "N" or "Xaa" used: Feature required	Xaa Cys Xaa Cys
245	W "N" or "Xaa" used: Feature required	Cys Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa X
247	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Gly Xaa Xaa Cys
270	W "N" or "Xaa" used: Feature required	atgwsnytn tyggnytnyt nytnytnacn wsngcnytn
271	W "N" or "Xaa" used: Feature required	cargcngarw snaaytnws nwsnaartty carttyws
272	W "N" or "Xaa" used: Feature required	gtncargayc cncarcayga rmgnathath acngtnws
273	W "N" or "Xaa" used: Feature required	ccnmgttyc cncayaenta yccnmgnaay acngtnyt
274	W "N" or "Xaa" used: Feature required	gargaraayg tntggathca rytnacntty gaygarmg
275	W "N" or "Xaa" used: Feature required	gaygayatht gyaartayga ytttygtngar gtngarga
276	W "N" or "Xaa" used: Feature required	ggnmgtnggt gyggwnsngg nacngtnccn ggnaarca
277	W "N" or "Xaa" used: Feature required	mgnathmgt tygtwnsnga ygartaytty ccnwsnga
278	W "N" or "Xaa" used: Feature required	aayathgtna tgccncartt yacngargcn gtnwsncc
279	W "N" or "Xaa" used: Feature required	ytncnytny ayytnytnaa yaaygcnaath acngcntt
280	W "N" or "Xaa" used: Feature required	mgntayytny arccngarmg ntggcarytn gayytnga
281	W "N" or "Xaa" used: Feature required	carytnytny gnaargcntt ygtnttyggm mgnaarws
282	W "N" or "Xaa" used: Feature required	ytnacngarg argtnmgynt ntaywsntgy acncnmg
283	W "N" or "Xaa" used: Feature required	gargarytna armgnacnga yacnathtty tggccngg
284	W "N" or "Xaa" used: Feature required	ggnggnaayt gygcntgytg yytncaayaay tgyaayga
285	W "N" or "Xaa" used: Feature required	gtnacnaara artaycayga rgtnytnear ytnmgncc
286	W "N" or "Xaa" used: Feature required	cayaarwsny tnacngaygt ngcnytngar caycayga
287	W "N" or "Xaa" used: Feature required	ggwnsnacng gnggn
299	W "N" or "Xaa" used: Feature required	mgntgyggng gnaaytg
311	W "N" or "Xaa" used: Feature required	mgntgydsng gnwrytg
323	W "N" or "Xaa" used: Feature required	carywnccns hrcanck
335	W "N" or "Xaa" used: Feature required	ttytggccng gntgyyt
347	W "N" or "Xaa" used: Feature required	ntddnccnn sntgybt
359	W "N" or "Xaa" used: Feature required	avrcansnng gnghnan
379	W "N" or "Xaa" used: Feature required	caynnnnvnt gyvvntg
391	W "N" or "Xaa" used: Feature required	canbbrcanb nnnnrtg
403	W "N" or "Xaa" used: Feature required	tgyacnccnm gnaaytt
415	W "N" or "Xaa" used: Feature required	tgyhnnmcm knrmndh
427	W "N" or "Xaa" used: Feature required	dhnkynmkng knndrca
455	W "N" or "Xaa" used: Feature required	ywnngnmrnt dbtgygg
467	W "N" or "Xaa" used: Feature required	ccrcavhany knccnwr
479	W "N" or "Xaa" used: Feature required	tdbccnmand vntaycc
491	W "N" or "Xaa" used: Feature required	ggrtanbhnt knngvha
661	W Line data has been corrected	His Glu Arg Cys Asp Cys Ile Cys Ser Ser A
850	W Line data has been corrected	Gly *

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**CORRECTION SUMMARY**  
**PATENT APPLICATION US/09/457,066**

DATE: 12/22/1999  
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Input Set: I457066.RAW

Line	Original Text	Corrected Data
91	Gly Gly *	Gly Gly
661	His Glu Arg Cys Asp Cys Ile Cys Ser Ser A	His Glu Arg Cys Asp Cys Ile Cys Ser Ser A
850	Gly *	Gly